



[Docket Number: OP-1613]

New Message Format for the Fedwire® Funds Service

AGENCY: Board of Governors of the Federal Reserve System.

ACTION: Notice of adoption of message format and request for comment.

SUMMARY: The Board of Governors of the Federal Reserve System (Board) is announcing that the Federal Reserve Banks (Reserve Banks) will adopt the ISO® 20022 message format for the Fedwire® Funds Service. The Board is also requesting public comment on a revised plan for migrating the Fedwire Funds Service to the ISO 20022 message format. Specifically, the Board is proposing that the Federal Reserve Banks would adopt the ISO 20022 message format on a single day rather than in three separate phases, as previously proposed. This single-day migration would be targeted for, and would be no earlier than, November 2023. Adopting ISO 20022 for the Fedwire Funds Services is part of a broader set of strategic initiatives to enhance Federal Reserve payment services, including an initiative to potentially expand the operating hours of the Fedwire Funds Service and the National Settlement Service.

DATES: Comments must be received on or before [insert 90 days after date of publication].

ADDRESSES: You may submit comments, identified by Docket No. OP-1613, by any of the following methods:

- **Agency Website:** <http://www.federalreserve.gov>. Follow the instructions for submitting comments at <http://www.federalreserve.gov/generalinfo/foia/ProposedRegs.cfm>.
- **E-mail:** regs.comments@federalreserve.gov. Include the docket number in the subject line of the message.
- **Fax:** (202) 452-3819 or (202) 452-3102.
- **Mail:** Address to Ann E. Misback, Secretary, Board of Governors of the Federal

Reserve System, 20th Street and Constitution Avenue, NW, Washington, DC 20551.

All public comments will be made available on the Board's website at <http://www.federalreserve.gov/generalinfo/foia/ProposedRegs.cfm> as submitted, unless modified for technical reasons or to remove personal information at the commenter's request. Accordingly, comments will not be edited to remove any identifying or contact information. Public comments may also be viewed electronically or in paper in Room 3515, 1801 K Street NW (between 18th and 19th Streets NW), between 9:00 a.m. and 5:00 p.m. on weekdays.

FOR FURTHER INFORMATION CONTACT: Evan Winerman, Senior Counsel (202-872-7578); or Cody Gaffney, Attorney (202/452-2674), Legal Division; Kristopher Natoli, Manager (202-452-3227); or Amber Latner, Lead Financial Institution Policy Analyst (202/973-6965), Division of Reserve Bank Operations and Payment Systems.

SUPPLEMENTARY INFORMATION:

I. Background

The Fedwire Funds Service is a real-time gross settlement (RTGS) system owned and operated by the Reserve Banks that enables participants to make immediately final payments using their balances held at the Reserve Banks or intraday credit provided by the Reserve Banks. The Fedwire Funds Service and the CHIPS[®] funds-transfer system, which is owned and operated by The Clearing House Payments Company L.L.C. (TCH), are the main large-value payment systems in the United States.¹

At present, the Fedwire Funds Service uses a proprietary message format that supports multiple types of communications, including (i) "value" messages that order the movement of funds, (ii) "nonvalue" messages that do not result in the movement of funds

¹ In 2020, the Fedwire Funds Service processed approximately 184 million payments with a total value of approximately \$840 trillion, and CHIPS processed approximately 117 million payments with a total value of approximately \$419 trillion. See <https://www.theclearinghouse.org/media/new/tch/documents/payment-systems/chips-volume-and-value.pdf>.

but rather communicate information or requests to other Fedwire Funds Service participants, and (iii) other messages that enable Fedwire Funds Service participants to request account balance information and the processing status of payment orders. The present Fedwire Funds Service message format can be mapped to—and is interoperable with—the CHIPS message format and the message type (MT) format of the SWIFT messaging network.

In 2004, the International Organization for Standardization (ISO)—an independent, non-governmental organization currently comprising 165 national standards bodies—published the ISO 20022 standard, which includes a suite of message format standards for the financial industry, including messages for payments, securities, trade services, debit and credit cards, and foreign exchange. ISO 20022 messages use extensible markup language (XML) syntax, have a common data dictionary that can support end-to-end payment message flow, and include structured data elements that provide for potentially richer payment message data than the current Fedwire Funds Service message format. ISO last reviewed and confirmed the ISO 20022 standard in 2019.

II. Adoption of the ISO 20022 Standard for the Fedwire Funds Service

For the reasons set forth below, the Board is announcing that the Reserve Banks will adopt the ISO 20022 standard for the Fedwire Funds Service. Migrating the Fedwire Funds Service to the ISO 20022 message format will provide a variety of policy and operational benefits and was supported by commenters.

A. Summary of the Board’s 2018 *Federal Register* Notice Relating to the Adoption of the ISO 20022 Standard

On July 5, 2018, the Board published a notice of proposed service enhancement and request for comment (2018 Notice) on a proposal to adopt the ISO 20022 message format for the Fedwire Funds Service.² The 2018 Notice more fully described the current Fedwire Funds Service message format and the ISO 20022 message format, including tables that

² 83 FR 31391 (July 5, 2018).

compared the two formats with respect to various message elements. In addition, the 2018 Notice described payments industry efforts related to ISO 20022, including outreach by the Reserve Banks and coordination efforts between the Reserve Banks, TCH, and other stakeholders.

The 2018 Notice further described the potential benefits of adopting the ISO 20022 message format for the Fedwire Funds Service. In particular, the Board highlighted potential benefits, including increased efficiency due to greater interoperability among global payment systems and types of payments, richer data that could improve anti-money laundering and sanctions screening, and broader adoption of extended remittance information (ERI).³

B. Public Comments Relating to the Adoption of the ISO 20022 Standard

The 2018 Notice included a request for comment on the potential benefits and drawbacks of adopting the ISO 20022 standard. The 60-day comment period ended on September 4, 2018. The Board received 17 comments from a range of industry stakeholders, including depository institutions, credit unions, industry associations, software vendors, and other market infrastructure operators.

The commenters all supported the proposal to adopt ISO 20022. Commenters who expressed a view on the benefits of adopting ISO 20022 generally agreed that ISO 20022 would produce the benefits that the Board identified in the 2018 Notice. Commenters also identified other potential benefits, including the possibility that adopting ISO 20022 as a global standard could increase competition in the payment ecosystem by reducing the cost of entry for payment processors and new market infrastructures.

The 2018 Notice also requested comment on the impact on Fedwire Funds Service participants and service providers of adopting the ISO 20022 standard. Commenters

³ ERI generally refers to details in the payment message regarding the purpose of a business-to-business payment. For example, a business that sends a payment to a vendor could include details regarding the invoices against which the vendor should apply the payment.

generally agreed that, as described in the 2018 Notice, the costs of implementation for a particular participant would vary depending on how that participant accesses the Fedwire Funds Service. In particular, Fedwire Funds Service participants that access the Fedwire Funds Service through solutions that require participants to develop their own software (or rely on software from vendors) will incur greater costs than participants that access the Fedwire Funds Service telephonically or through a Reserve Bank website in which payments are entered manually. A commenter noted that implementation costs incurred by a vendor may ultimately be passed on to a participant's customers.

One commenter expressed concern that the proposal could impose significant burdens on corporate end users. This commenter argued that corporate end users should be permitted to (i) maintain their current internal payment applications and (ii) rely on financial institutions and service providers to translate payment messages into ISO 20022 format. Relatedly, another commenter expressed concern that the proposal lacks guidelines concerning "user to bank" messages (*i.e.*, messages between depository institutions and their customers). The Reserve Banks' ISO 20022 implementation will establish guidelines for messages only between the Reserve Banks and direct Fedwire Funds Service participants (generally depository institutions). Accordingly, each Fedwire Funds Service participant will need to determine how to exchange messages with its customers. The Board notes that the ISO 20022 suite of payment messages includes a number of customer-to-bank messages and that Fedwire Funds Service participants could use these messages in their interfaces with their customers, which would eliminate the need to translate end users' payment message into ISO 20022 format.⁴ Similarly, as the Board noted in the 2018 Notice, Fedwire Funds Service participants will need to determine, consistent with any legal obligations, how

⁴ For example, a corporate customer could send a payment order to its bank using the Customer Credit Transfer Initiation (pain.001) message and could request a reversal of a payment using the Customer Payment Reversal (pain.007) message. For additional ISO 20022 payment messages, *see* https://www.iso20022.org/payments_messages.page. The Board has learned that several Fedwire Funds Service participants already receive ISO 20022 messages from their corporate customers and translate those messages into the current proprietary Fedwire Funds Service format.

to handle enhanced data that they receive, including whether (and how) to provide such data to the next receiving bank in the funds transfer or to the beneficiary. The Board acknowledges that transitioning to the ISO 20022 message format may impose some transition costs on Fedwire Funds Service participants and corporate end-users, but believes the benefits of adoption, as discussed elsewhere in this notice, significantly outweigh these costs.

In addition to discussing the adoption of the ISO 20022 standard and its impact on participants and service providers, commenters provided feedback regarding the functionality of ISO 20022, suggesting that (among other things) the Reserve Banks should expand the range of data that Fedwire Funds Service participants will be able to include in payment orders. One commenter suggested, for example, that the Reserve Banks should implement ISO 20022 in a manner that allows a sender to identify all persons that relate to the transaction for which the funds transfer is being made (*i.e.*, not just the parties included in the payment portion of the transaction). The same commenter expressed concern that the proposal would implement ISO 20022 in a manner that matches, but does not improve upon, the current Fedwire Funds Service message format.

Once the Reserve Banks fully implement ISO 20022, Fedwire Funds Service participants will be able to send and receive ISO 20022 messages that contain additional and more detailed data than currently available in the Fedwire Funds Service message format, including many of the functionalities suggested by commenters. The Board believes these enhanced data elements represent an improvement on the current Fedwire Funds Service message format. New data fields in ISO 20022 messages will include:

- New data elements for additional persons or entities identified in payment messages (*i.e.*, initiating party, two additional previous instructing agents, two additional intermediary agents, ultimate debtor, ultimate creditor)
- New purpose code data element to help explain the business purpose of the funds

transfer

- New data element to provide information about a bilateral processing agreement
- Longer lengths for certain elements (*e.g.*, the name element can be up to 140 characters)
- Structured postal address data elements, including a country code
- Explicit data element to include a Legal Entity Identifier for all legal entities in the funds transfer
- New regulatory reporting data elements to provide regulatory information (*e.g.*, OFAC license) related to customer transfers

The Board notes that the Reserve Banks sought input from the Format Advisory Group⁵ on whether the Reserve Banks' adoption of the ISO 20022 standard should also include the ISO 20022 stand-alone remittance message (remt.001),⁶ but the Format Advisory Group indicated that there is currently no business case for the Fedwire Funds Service to support that message.

A commenter requested that Fedwire Funds Service participants sending cross-border funds transfers be required to complete a country code in the address component for the beneficiary. The Reserve Banks will require the country code for the originator and beneficiary elements when the structured format address option is used for domestic or cross-border funds transfers.

One commenter suggested that the Reserve Banks should implement ISO 20022 in a way that better supports the inclusion of ERI. This commenter asserted that the Reserve Banks should increase the size permitted for the structured or unstructured elements for ERI,

⁵ The Format Advisory Group is jointly chaired by the Federal Reserve Bank of New York and TCH and includes 18 global and regional banks. Seventeen institutions are Fedwire Funds Service participants, 10 of which are also CHIPS participants. One institution is a participant in CHIPS only.

⁶ The ISO 20022 remt.001 message is a standalone nonvalue message that includes the remittance details related to a payment (*e.g.*, invoice details). This message includes a reference to the value message so that the receiver can reconcile the remt.001 message to the value message (*e.g.*, pacs.008).

emphasizing that it would be problematic for ERI elements to impose size limitations. The Reserve Banks plan to support up to 140 characters for unstructured remittance information and up to 9,000 characters for structured ERI in accordance with the High Value Payment Systems Plus (HVPS+) Group guidelines,⁷ which promote straight-through processing by reducing the use of unstructured “free text” data and encouraging the use of structured data. The Reserve Banks will reassess the business case for providing more than 9,000 characters for structured ERI if actual usage by Fedwire Funds Service participants increases over time.

A commenter suggested that the Reserve Banks consider including expanded character sets (*e.g.*, Chinese characters) in the ISO 20022 implementation for the Fedwire Funds Service. During the planning phase for the ISO 20022 migration, the Reserve Banks consulted with the Format Advisory Group to determine whether to expand the character sets for the Fedwire Funds Service. The Format Advisory Group recommended that the Reserve Banks defer any decision to expand character sets, noting that (i) the level of demand for expanded character sets is uncertain and (ii) expanding character sets would be a significant change that would impact other participant applications that interface with participants’ payment applications. In light of the uncertain demand, the ISO 20022 implementation for the Fedwire Funds Service will not include additional character sets at this time but may consider including additional character sets in the future.

Another commenter noted that the proposal lacks specifications to support an application program interface (API) to the proposed ISO 20022 messages. An API would allow a Fedwire Funds Service participant to request certain information from the Fedwire Funds Service according to a specific set of instructions (*e.g.*, instructions to request an account balance). Incorporating APIs into the Fedwire Funds Service ISO 20022 initiative

⁷ The HVPS+ Group was convened by SWIFT in early 2016 to develop a set of guidelines for ISO 20022 messages used by high-value payment systems around the world. The Reserve Banks and TCH have participated in the HVPS+ Group, and they have based their ISO 20022 implementation plans for the Fedwire Funds Service and CHIPS, respectively, on the HVPS+ Group guidelines.

would increase the scope of the project and extend the migration timeline. Thus, APIs are outside the scope of the current ISO 20022 implementation plan but would be considered as a future enhancement.

A few commenters raised more general issues related to the adoption of the ISO 20022 standard. One commenter suggested that the Board work to ensure that ISO 20022 does not disrupt the U.S. legal framework for wire transfers. As the Board noted in the 2018 Notice, ISO 20022 employs terminology that differs in key respects from that used in U.S. funds-transfer law, including Article 4A of the Uniform Commercial Code (UCC) and subpart B of the Board's Regulation J.⁸ The Board amended subpart B of Regulation J and related commentary to clarify that terms used in financial messaging standards, such as ISO 20022, do not confer or connote legal status or responsibilities.⁹ TCH also indicated in its comment letter that it would include similar clarifications in the CHIPS rules. As a result, the Board does not anticipate that the adoption of ISO 20022 will disrupt the U.S. legal framework for wire transfers.

Finally, a commenter recommended that the Federal Reserve increase its efforts to educate the financial industry and corporate end-users regarding ISO 20022, expressing concern that small entities in particular do not understand ISO 20022. As the proposal described in detail, the Reserve Banks have engaged in extensive public outreach regarding ISO 20022 by presenting at industry conferences; publishing webinars; establishing websites to educate the public about ISO 20022; establishing advisory groups that include banks, service providers, software vendors, and other stakeholders to provide input on how to implement ISO 20022 for the Fedwire Funds Service; and hosting in-person workshops to provide detailed explanations of each phase of the ISO 20022 implementation plan. The

⁸ 12 CFR Part 210. Subpart B of Regulation J, which governs funds transfers through the Fedwire Funds Service, generally incorporates UCC Article 4A.

⁹ 12 CFR 210.25(e).

Reserve Banks will publish additional webinars and hold additional in-person workshops before the Fedwire Funds Service migrates to ISO 20022.

III. Proposed New Implementation Strategy for the ISO 20022 Standard

A. Summary of 2018 Notice Relating to Implementation Strategy

The 2018 Notice proposed that the Reserve Banks would transition from the current Fedwire Funds Service message format to ISO 20022 in three phases. In phase 1, the Reserve Banks would make certain changes to the current Fedwire Funds Service message format to address existing interoperability gaps with SWIFT's proprietary message format. Phase 1 would be targeted for completion by November 23, 2020. In phase 2, the Reserve Banks would migrate Fedwire Funds Service participants in waves to send and receive ISO 20022 messages that have elements and character lengths that are comparable to the current Fedwire Funds Service message format. In addition to this "like-for-like" implementation, the Reserve Banks would also require Fedwire Funds Services participants during phase 2 to test their ability to receive full ISO 20022 messages to prepare for full implementation of the ISO 20022 standard. Phase 2 would be targeted for completion from March 2022 to August 2023. In phase 3, the Reserve Banks would fully implement ISO 20022 by enabling Fedwire Funds Service participants to send ISO 20022 messages that contain enhanced data. Phase 3 would be targeted for completion by November 2023.

B. Public Comments Relating to Three-Phased Implementation Strategy

Some of the 17 comments the Board received on the 2018 Notice addressed the proposed three-phased implementation strategy for the ISO 20022 standard. For example, one commenter suggested that phases 1, 2, and 3 of the Fedwire Funds Service's transition to ISO 20022 could be combined or shortened in various ways. The commenter stated that combining phases 1 and 2 would allow users with an urgent need to adopt ISO 20022 to do so sooner. The commenter alternatively suggested that the Reserve Banks could combine phases 2 and 3, arguing that Fedwire Funds Service participants would be able to mitigate

resulting risks because they would only be required to receive enhanced data in phase 3. As described below, the Board is proposing a revised, single-day implementation strategy in lieu of the three-phased strategy that was originally proposed. Additional comments received in response to the 2018 Notice are discussed in connection with various implementation-related issues described below.

C. Developments Since the 2018 Notice

In September 2019, the Reserve Banks announced a pause in their plans for the three-phased migration to the ISO 20022 messaging standard in response to a formal request from the Payments Market Practice Group (PMPG) to instead consider a single-day implementation.¹⁰ Specifically, the PMPG asked the Reserve Banks and other large-value payment system operators around the world to adopt a common approach to implementing fully enhanced ISO 20022 messages to reduce the risk and duration of cross-border interoperability issues. The PMPG noted that there would be a high degree of readiness within the cross-border payments industry for a single-day implementation of ISO 20022 as a result of industry investments in response to SWIFT's and Eurozone RTGS operators' ISO 20022 migration schedules.¹¹ In addition, the PMPG raised concerns about the potential operational risks introduced by certain aspects of the phased implementation approach, such as the need to truncate ISO 20022 message details. Finally, the PMPG suggested that the elimination of a like-for-like phase in a phased implementation approach would simplify implementation requirements for both operators and payment system participants, create a more consistent global operating model, and result in faster industry adoption of the ISO

¹⁰ See <https://www.frb services.org/news/press-releases/092319-fedwire-funds-migration-iso20022-messages.html>. The PMPG is an independent advisory group of payments experts that reports to the Banking and Payments Committee of SWIFT's Board of Directors. PMPG members represent global financial institution from Asia Pacific, Europe, and North America.

¹¹ At the time, SWIFT, Eurosystem's TARGET2, and EBA Clearing's EURO1/STEP1 expected to complete their migrations to ISO 20022 by November 2021, although they now expect to complete their migrations in November 2022.

20022 message standard.¹²

Since the September 2019 announcement, the Reserve Banks have been exploring a revised ISO 20022 implementation strategy that would support a single-day implementation of fully enhanced ISO 20022 messages. In doing so, the Reserve Banks have engaged with industry through the Format Advisory Group. In addition to discussing a potential single-day implementation strategy for the Fedwire Funds Service, these discussions have considered the potential cross-border interoperability issues that could arise if the Reserve Banks and other large-value payment system operators do not implement the ISO 20022 messaging standard by the time SWIFT enables its participants to send ISO 20022 messages over its global network in 2022.

Based on this industry engagement, the Board is now proposing, and seeking comment on, a single-day implementation strategy to migrate the Fedwire Funds Service to the ISO 20022 messaging standard.

D. Revised Proposal for Migrating the Fedwire Funds Service to the ISO 20022 Standard on a Single Day

The Board is proposing that the Reserve Banks adopt the ISO 20022 message format on a single day rather than in three separate phases, as previously proposed. As of the implementation date (*i.e.*, the date on which the Fedwire Funds Service is scheduled to migrate to ISO 20022), all Fedwire Funds Service participants would be required to be able to send and receive fully enhanced ISO 20022 messages and the proprietary message format for the Fedwire Funds Service would no longer be supported. The implementation date would be targeted for, and would be no earlier than, November 2023.

¹² Subsequent to the PMPG request, Payments Canada announced that beginning November 2022, it will implement a new closed user group for Lynx participants to exchange ISO 20022 payment messages to support cross-border interoperability and begin the Lynx migration from SWIFT MT messages to ISO 20022 messages for all Canadian wire transfer payments. Additionally, the Bank of England announced it expects to complete its migration to fully enhanced ISO 20022 messages for the CHAPS system in February 2023.

The Board considered various issues in connection with the proposed single-day implementation of ISO 20022 which are outlined in the sections below.

1. Interoperability with Other Payment and Messaging Systems

In connection with the 2018 Notice, various commenters suggested that the Reserve Banks should coordinate the implementation of ISO 20022 with CHIPS and SWIFT to ensure that the three systems remain interoperable. Two commenters also suggested that Nacha adopt ISO 20022 for automated clearing house (ACH) payments.¹³

a. Alignment with CHIPS

Five commenters suggested that the Reserve Banks and TCH should align implementation of ISO 20022 for the Fedwire Funds Service and CHIPS.¹⁴ As described in the 2018 Notice, the Reserve Banks and TCH independently decided to pursue implementation of ISO 20022. The Federal Reserve intends to align the timing of ISO 20022 implementation for the Fedwire Funds Service with that of CHIPS to the extent possible to maximize benefits for Federal Reserve customers that also use CHIPS. In March 2021, TCH announced its intention to adopt the ISO 20022 message format for the CHIPS system on a single day in November 2023.

b. Alignment with SWIFT

In December 2018, SWIFT announced that it would migrate to ISO 20022 for payments and cash reporting statements beginning in 2021. SWIFT subsequently postponed the migration to November 2022.¹⁵ Under the SWIFT plan, beginning in November 2022, SWIFT will allow users to send either the SWIFT MT format or ISO 20022 messages, but will require all SWIFT users to receive ISO 20022 messages. For a SWIFT receiver that has not yet migrated its internal processing systems to support ISO 20022 messages, however,

¹³ Nacha, whose membership consists of insured financial institutions and regional payment associations, establishes network-wide ACH rules through its Operating Rules & Guidelines.

¹⁴ Two of these commenters also suggested that the Reserve Banks and TCH should implement ISO 20022 in a manner that aligns with the recommendations of the High Value Payment Systems Plus (HVPS+) Group.

¹⁵ For the announcement of SWIFT's November 2022 migration date, *see* <https://www.swift.com/standards/iso-20022/iso-20022-programme/timeline>.

SWIFT will deliver to the receiver both an ISO 20022 message and a SWIFT MT message that the SWIFT receiver can use for internal processing.

The Board recognizes that financial institutions may face cross-border interoperability issues if SWIFT users migrate to ISO 20022 before the Reserve Banks implement ISO 20022. Specifically, in November 2022, when SWIFT users begin receiving ISO 20022 messages that need to be settled via the Fedwire Funds Service, the users will need to map the ISO 20022 data elements to the current proprietary Fedwire Funds Service message format. However, the ISO 20022 message may contain new data elements or have longer character lengths that are not supported in the current proprietary message format of the Fedwire Funds Service. To reduce the risk of data truncation, the Reserve Banks, in cooperation with global banks, have developed a market practice to ensure all ISO 20022 data can be carried in the Fedwire Funds Service message format. Specifically, in November 2022, the Reserve Banks will make minor changes to an existing 9,000-character field within the current Fedwire Funds Service message format to create sufficient space to include the full text of data-rich ISO 20022 messages.¹⁶ The market practice, combined with Fedwire Funds Service message format changes in November 2022, will reduce the risk of cross-border interoperability issues during the period between SWIFT's implementation of ISO 20022 and the Fedwire Funds Service's implementation of ISO 20022.

c. Adoption of ISO 20022 for Instant Payments

ISO 20022 is being implemented globally as messaging standard for real-time retail payment systems. The standard is used for TCH's Real Time Payments Network and will be used for the Federal Reserve's FedNowSM Service, which is targeted for implementation in 2023. The Reserve Banks are applying a holistic approach to implementing ISO 20022 across the different payment systems they operate by implementing ISO 20022 consistent

¹⁶ TCH plans to implement a similar change to the CHIPS system in November 2022.

with the global standard and defined best practices. The Reserve Banks will align the implementation of ISO 20022 for the FedNow Service and the Fedwire Funds Service to the greatest extent possible, but where there are differences in functionality between the services, there will be different ISO 20022 messages. For example, to eliminate the need for Fedwire Funds Service participants to receive new types of payment messages, the Fedwire Funds Service will not adopt a request for information feature planned for the FedNow Service. Furthermore, the Reserve Banks have collaborated with TCH to optimize compatibility of the ISO 20022 messages for the two U.S. instant payment services and the two U.S. high-value payment services to benefit common users across the industry.

d. Adoption of ISO 20022 for ACH payments

Two commenters requested that the Board work with Nacha to ensure that ACH payments also migrate to ISO 20022. The Board notes that Nacha and the ACH operators (*i.e.*, the Reserve Banks and TCH) have not yet determined whether they will adopt the ISO 20022 message format for the ACH system. However, Nacha has developed an ISO 20022 Mapping Guide and Tool to help financial institutions translate ISO 20022 messages into the existing ACH format.¹⁷

e. Consolidated List of Industry Initiatives

A consolidated list of the industry initiatives mentioned above is noted below. Fedwire Funds Service participants that also participate in SWIFT and the high-value payment systems noted below and those that plan to participate in the FedNow Service will also need to prepare for these initiatives.

Target Date	Description
November 2022	<ul style="list-style-type: none"> SWIFT will allow its users to begin sending ISO 20022 messages and will require users to receive ISO 20022 messages. The Eurosystem and EBA Clearing will migrate to ISO 20022 messages for the TARGET2 system and EURO1/STEP1 system respectively on a single day.

¹⁷ See <https://www.nacha.org/content/iso-20022-mapping-guide-tool>.

	<ul style="list-style-type: none"> ▪ Payments Canada announced that it will implement a new closed user group for Lynx participants to exchange ISO 20022 payment messages to support cross-border interoperability, and begin the Lynx migration from SWIFT MT messages to ISO 20022 messages for all Canadian wire transfer payments. ▪ The Reserve Banks and TCH will implement changes to the proprietary message formats for the Fedwire Funds Service and the CHIPS system respectively to support ISO 20022 cross-border interoperability.
February 2023	<ul style="list-style-type: none"> ▪ The Bank of England is expected to migrate to fully enhanced ISO 20022 messages for the CHAPS system.
2023 (exact date to be announced later)	<ul style="list-style-type: none"> ▪ The Reserve Banks expect to launch the FedNow Service, which will support ISO 20022 messages.
November 2023	<ul style="list-style-type: none"> ▪ TCH is expected to implement ISO 20022 messages for the CHIPS system on a single day.
November 2023 or later	<ul style="list-style-type: none"> ▪ The Reserve Banks are proposing to implement ISO 20022 messages for the Fedwire Funds Service on a single day.

2. Message Format Documentation

The Reserve Banks are using a restricted page on SWIFT's MyStandards web-based application as a tool to store and share documentation related to the ISO 20022 project with authorized Fedwire Funds Service participants and software vendors.¹⁸ The Reserve Banks will publish the final message format documents for the fully enhanced ISO 20022 messages after the Board announces a final implementation strategy. Within the MyStandards application, Fedwire Funds Service participants and software vendors will be able to compare the ISO 20022 specifications for the Fedwire Funds Service with the ISO 20022 specifications for other payment systems to which they have access, including the specifications for the FedNow Service.

In response to the 2018 Notice, a commenter suggested that using MyStandards could reduce competition for documentation-related services and could be perceived as giving an unfair advantage to SWIFT, the vendor of MyStandards. The Reserve Banks selected MyStandards to maximize efficiency for the Reserve Banks and their customers,

¹⁸ For more information on MyStandards, see <https://www.swift.com/our-solutions/compliance-and-shared-services/mystandards>.

some of which already use MyStandards for their own business needs or as participants in other retail and large-value payment systems.¹⁹ The Reserve Banks provide access to MyStandards free of charge.

The same commenter also asserted that software vendors should be given direct access to the MyStandards service rather than gaining access via a Fedwire Funds Service participant, arguing that direct access would foster competition. Due to concerns about the sensitivity of the information that might be stored in the MyStandards service, the Reserve Banks will allow only Fedwire Funds Service participants, software vendors, and service providers to access Fedwire Funds Service documentation in the MyStandards service.²⁰ The Reserve Banks have sent communications to Fedwire Funds Service participants to obtain contact information for software vendors so that the Reserve Banks can contact those vendors directly. In addition, the Reserve Banks have sent communications to known software vendors to provide them with direct access to the documentation in the MyStandards service.

3. Message Format Testing

To reduce the risks associated with a single-day implementation of the ISO 20022 messages for the Fedwire Funds Service, the Reserve Banks would require rigorous testing in three different environments. Specifically, the Reserve Banks would enable authorized Fedwire Funds Service participants and software vendors to use the Readiness Portal feature within MyStandards to ensure that their ISO 20022 messages conform to Fedwire Funds Service requirements. For example, the Readiness Portal testing would help participants ensure that their ISO 20022 messages are properly formatted (e.g., include mandatory data

¹⁹ In March 2021, the Reserve Banks published the ISO 20022 specifications for the FedNow Service on SWIFT's MyStandards web-based application tool. The European Central Bank, EBA Clearing, Bank of England, Payments Canada, and The Clearing House use MyStandards to maintain their ISO 20022 message format documentation.

²⁰ The Reserve Banks have posted on a Reserve Bank website a list of software vendors that Fedwire Funds Service participants have identified as needing access to Fedwire Funds Service message documentation. See <https://www.frbsservices.org/resources/financial-services/wires/software-vendors.html>.

elements, adhere to required element lengths, use valid codes, and contain valid characters). The Readiness Portal would provide participants and software vendors an opportunity to perform advance testing of their ISO 20022 messages and address any issues with their ISO 20022 messages before performing functionality testing with the Fedwire Funds Service in the Reserve Banks' depository institution testing (DIT) environment and production environment.²¹

The Reserve Banks would introduce a second DIT environment nine to twelve months ahead of the implementation date to provide participants a dedicated environment for testing ISO 20022.²² The Reserve Banks would also provide opportunities for participants to conduct coordinating testing in the second DIT environment so that they can test their ability to send and receive ISO 20022 messages among each other. Further, the Reserve Banks would provide opportunities for participants to test their ISO 20022 messages in the production environment on select Saturdays about two to three months prior to the implementation date.

Finally, the Reserve Banks would require certain customers and service providers to complete a separate test script in each of the testing environments, including the MyStandards Readiness Portal, the second DIT environment, and the production environment.²³ The advance testing in the MyStandards Readiness Portal should reduce the amount of time needed to successfully complete the test script in the second DIT and production environments.

The Reserve Banks would publish a final testing plan including the testing

²¹ For more information on the DIT environment, *see* <https://www.frbsservices.org/financial-services/wires/testing/di-testing.html>. For more information on the production environment, *see* <https://www.frbsservices.org/financial-services/wires/testing/production-test.html>.

²² The current DIT environment will remain until the ISO 20022 implementation date to allow participants to test with the current proprietary message format for the Fedwire Funds Service.

²³ This requirement would apply to all customers and service providers that have their own FedLine Direct® connection to the Fedwire Funds Service; customers that import 20 or more transactions per day using the FedPayments Manager – Funds application via the FedLine Advantage® solution; and select customers that enter messages directly into the FedPayments Manager – Funds application screens.

requirements for each testing environment after the Board announces a final implementation strategy.

4. Temporary Backout Strategy Before the Migration to ISO 20022

If the Reserve Banks encounter significant problems activating ISO 20022 on the Saturday before the implementation date, the Reserve Banks would have the ability to “back out” the ISO 20022 changes and return to the legacy format temporarily. Fedwire Funds Service participants would need to attest to their ability to back out their ISO 20022 changes when they conduct their production testing.

The backout strategy would only apply if the Reserve Banks encounter a significant issue when activating the ISO 20022 changes before the implementation date. The Reserve Banks would not invoke the backout strategy if a Fedwire Funds Service participant experiences an issue with an internal application. Rather, a participant would be able to use the FedPayments® Manager – Funds application via the FedLine Advantage® solution as a contingency alternative if it encounters an issue with an internal payment application that cannot be fixed before the implementation date.

5. Strategy for Addressing Technical Problems after the Migration to ISO 20022

If the Reserve Banks encounter a significant issue on or after the implementation date, the Reserve Banks would not be able to return to the legacy format. Rather, the Reserve Banks would invoke a “fix-in-place” strategy to address the issue. Such a fix-in-place strategy would require the Reserve Banks to implement a software update to address any issue as soon as the fix had been identified and fully tested. This strategy is consistent with previous customer-facing initiatives, and the Reserve Banks believe it would reduce complexity and costs associated with the ISO 20022 initiative because the Reserve Banks and Fedwire Funds Service participants would not need to retain the ability to support both the new ISO 20022 format and the current proprietary message format.

IV. Implementation of ISO 20022 and Expanded Operating Hours for the Fedwire Funds Service and the National Settlement Service

The proposed adoption of ISO 20022 for the Fedwire Funds Service should be viewed as part of a broader set of initiatives to expand and enhance Federal Reserve payment services, including the development and launch of the FedNow Service and the potential expansion of operating hours for the Fedwire Funds Service and the National Settlement Service (NSS).²⁴ The Board recognizes that these initiatives have implications for the financial services industry, potentially necessitating changes to operational processes and technology while also creating new business and service opportunities. This notice reflects the Board's view that the migration to ISO 20022 should proceed in line with the global migration to ISO 20022.

Regarding expanding the operating hours of the Fedwire Funds Service and the NSS, the Board is actively considering the risk, operational, and policy implications of expanding the operating hours of those services up to 24x7x365 and is analyzing potential operational options, particularly as the Reserve Banks develop and prepare to launch the FedNow Service.²⁵ In considering a potential expansion of operating hours, the Federal Reserve is committed to proposing a path that supports a safe, efficient, and resilient payment system and sets a strong foundation for the future in light of the increasingly round-the-clock nature of commerce and financial market activity in a global economy.²⁶ The Board expects to issue a separate *Federal Register* notice in the next year to seek input on a proposal to expand Fedwire Funds Service and NSS operating hours up to 24x7x365.

²⁴ Recent enhancements to Federal Reserve payment services include the expansion of Fedwire Funds Service and NSS operating hours, effective March 8, 2021, to support an additional settlement window for same-day automated clearinghouse (ACH) payments. 84 FR 71940 (Dec. 30, 2019).

²⁵ As originally announced by the Board in 2019, the Federal Reserve has been exploring an expansion of Fedwire Funds Service and NSS operating hours, up to 24x7x365, to support a wide range of payment activities, including liquidity management in private-sector RTGS services for instant payments. See 84 FR 39297 (Aug. 9, 2019).

²⁶ Consistent with these considerations, past and recent industry input have supported 24x7x365 operations as a potentially important target for the Fedwire Funds Service and the NSS. See *Payments Risk Committee: Fedwire Expanded Hours Whitepaper*, available at <https://www.newyorkfed.org/medialibrary/microsites/prc/files/2021/prc-fedwire-expanded-hours-considerations-white-paper>.

V. Request for Comment

The Board requests public comment on all aspects of its proposal to migrate the Fedwire Funds Service to the ISO 20022 message format on a single day, as described in this notice, rather than in three separate implementation phases as proposed in the 2018 Notice. In particular, the Board requests comment on the following questions:

1. Do you support the single-day implementation strategy? If not, what implementation strategy would be optimal?
2. Should the Reserve Banks implement ISO 20022 for the Fedwire Funds Service in November 2023? If not, what would be your preferred implementation date? Please provide the rationale behind your preference.
3. Should the Reserve Banks and TCH implement ISO 20022 for the Fedwire Funds Service and CHIPS on the same day?
4. Do you have any resource constraints or other challenges that would impact your ability to prepare for the implementation of ISO 20022 for the Fedwire Funds Service? (For example, some Fedwire Funds Service participants and software vendors may also be preparing for the ISO 20022 implementations for SWIFT and other payment system operators, which begin in November 2022, and the Reserve Banks' launch of the FedNow Service in 2023.)
5. Do you have any concerns about the Reserve Banks' proposed testing strategy and requirements?
6. How much time would you need to test your ISO 20022 messages in the MyStandards Readiness Portal before testing in the new second DIT environment?
7. Would nine months of testing ISO 20022 messages in the new second DIT environment be sufficient? If not, what is the minimum amount of testing you would require in the second DIT environment before the ISO 20022 implementation date?
8. Do you have any concerns about (i) proposed backout strategy for the ISO 20022

changes on the Saturday before the implementation date or (ii) the proposed fix-in-place strategy after on or after the implementation date?

VI. Competitive Impact Analysis

The Board conducts a competitive impact analysis when it considers a rule or policy change that may have a substantial effect on payment system participants. Specifically, the Board determines whether there would be a direct or material adverse effect on the ability of other service providers to compete with the Federal Reserve due to differing legal powers or due to the Federal Reserve's dominant market position deriving from such legal differences.²⁷

The Board explained in the 2018 Notice that it does not believe that adopting ISO 20022 for the Fedwire Funds Service would have an adverse impact on other service providers. The current proprietary message format for the Fedwire Funds Service is interoperable with the proprietary message format for the CHIPS system. The Reserve Banks have worked with TCH on plans to align ISO 20022 implementation for the Fedwire Funds Service and CHIPS where possible and will continue to do so; the Reserve Banks and TCH have previously indicated that such coordination will benefit their common customers.

TCH submitted a comment on the 2018 Notice in which it agreed that adopting ISO 20022 for the Fedwire Funds Service will not have an adverse effect on TCH's ability to compete with the Fedwire Funds Service assuming that there are no significant differences in (i) how the applicable legal frameworks for CHIPS and the Fedwire Funds Service address the legal issues created by the adoption of ISO 20022 and (ii) the regulatory and compliance expectations for CHIPS and Fedwire Funds Service payments. As described above, the Board has amended Regulation J to ensure that adopting ISO 20022 does not affect the legal framework for Fedwire Funds Service payments. TCH also indicated in its comment letter that it would include similar clarifications in the CHIPS rules. Given that

²⁷ See http://www.federalreserve.gov/paymentsystems/pfs_frpaysys.htm.

the Reserve Banks and TCH plan to continue collaborating on their respective ISO 20022 plans for the Fedwire Funds Service and CHIPS, the Board does not believe that implementing ISO 20022 will result in different regulatory or compliance expectations for CHIPS funds transfers relative to Fedwire Funds Service funds transfers.

By order of the Board of Governors of the Federal Reserve System, September 30, 2021.

Ann E. Misback,

Secretary of the Board.

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